IC250: Lab assignment 9

HackerRank link: `https://www.hackerrank.com/lab9`

1. **Topological sort.**

   You need to order several ill-behaved children in a line. You are given the number of children, the number of "hates", and statements like: "A hates B". If A hates B, then A cannot stand behind B, because A will throw something at B. Given the above information, determine how to make the kids stand in a line. In case of ties, choose the name in alphabetical order. Test cases are given in HackerRank.

2. **Minimum spanning tree.**

   Given an undirected, weighted graph, use Prim's algorithm to determine the cost of the minimum spanning tree. Test cases are in HackerRank.

3. **Dijkstra's algorithm.**

   Given a directed, weighted graph, and a source vertex s, use Dijkstra's algorithm to find the shortest path from s to all other vertices. Code for the algorithm is provided on Moodle.